

## Research Notes

### A New Species of *Scolelepis* (Polychaeta: Spionidae) from California Sandy Beaches

Studies by Kolpack and Straughan (1971), Trask (1971), Patterson (1974), Straughan and Patterson (1975), Straughan (1973, 1974a, b, c, 1975, 1978, 1979) and Straughan and Hadley (1980) report *Scolelepis squamata* (Müller) (recorded as *Nerinides acuta* (Treadwell) or *Scolelepis acuta* (Treadwell)) as the most common spionid of central and southern California sandy beaches. A review of the *S. squamata* from these studies has revealed two other forms of *Scolelepis* Blainville. One of the forms is described herein as a new species; a description of the other is omitted for lack of complete material. The holotype and paratypes of the new species are deposited in the collections of the Allan Hancock Foundation (AHF), University of Southern California, Los Angeles. The re-examination of material and subsequent species description were funded by Southern California Edison, Rosemead, California.

#### *Scolelepis bullibranchia*, n. sp.

*Material examined.*—Huntington Beach, 23 April 1971, (Holotype, AHF 1375; 4 paratypes, AHF 1376); Zuma Beach, 4 Dec. 1971, (1); Scripps Beach, 20 April 1976, (19); Santa Cruz Island, 20 Jan. 1978, (1); Estero Bay, Site 0, Feb. 1974, (3).

*Diagnosis.*—Prostomium pointed, extending posteriorly as a caruncle to setiger 2; caruncle attached to dorsum. Occipital cirrus absent. Peristomium well developed, without lateral wings. Branchiae beginning on setiger 2, continuing to far posterior segments; branchiae distally free from dorsal lamellae. Anterior setigers with capillary setae only; median and posterior neuropodia with tridentate hooded hooks and capillary setae, notopodia with capillary setae only.

*Description.*—Holotype complete, 128 segments, 73 mm long and 1.8 mm wide. Body widest anteriorly, rectangular in cross section, tapering posteriorly becoming sub-quadrate in cross section.

Prostomium inflated, anteriorly acuminate; slightly tapering posteriorly to the level of a transverse row of 4 eyespots, then constricting to a narrow caruncle extending to setiger 2 (Fig. 1a). Occipital cirrus absent. Palps extending posteriorly to about setiger 21; small basal sheaths smooth. Peristomium well developed without lateral wings.

Setiger 1 much reduced, with petaloid dorsal and ventral lamellae; notosetae absent (Fig. 1b). Dorsal lamellae from setiger 2 with lateral margins somewhat thickened, terminating in pointed tips free from branchiae (Fig. 1c). Ventral lamellae broadly rounded, increasing in size posteriorly (Fig. 1c-d); at setigers 21-29 lamellae dividing to ventral and interramal lamellae (Fig. 1c). Interramal lamellae becoming distally bluntly pointed in posterior segments (Fig. 1f). Branchiae distally pointed, basally fused to dorsal lamellae, distally free (Fig. 1c-d); lateral margins at first thickened, then becoming swollen with darkened glandular inclu-

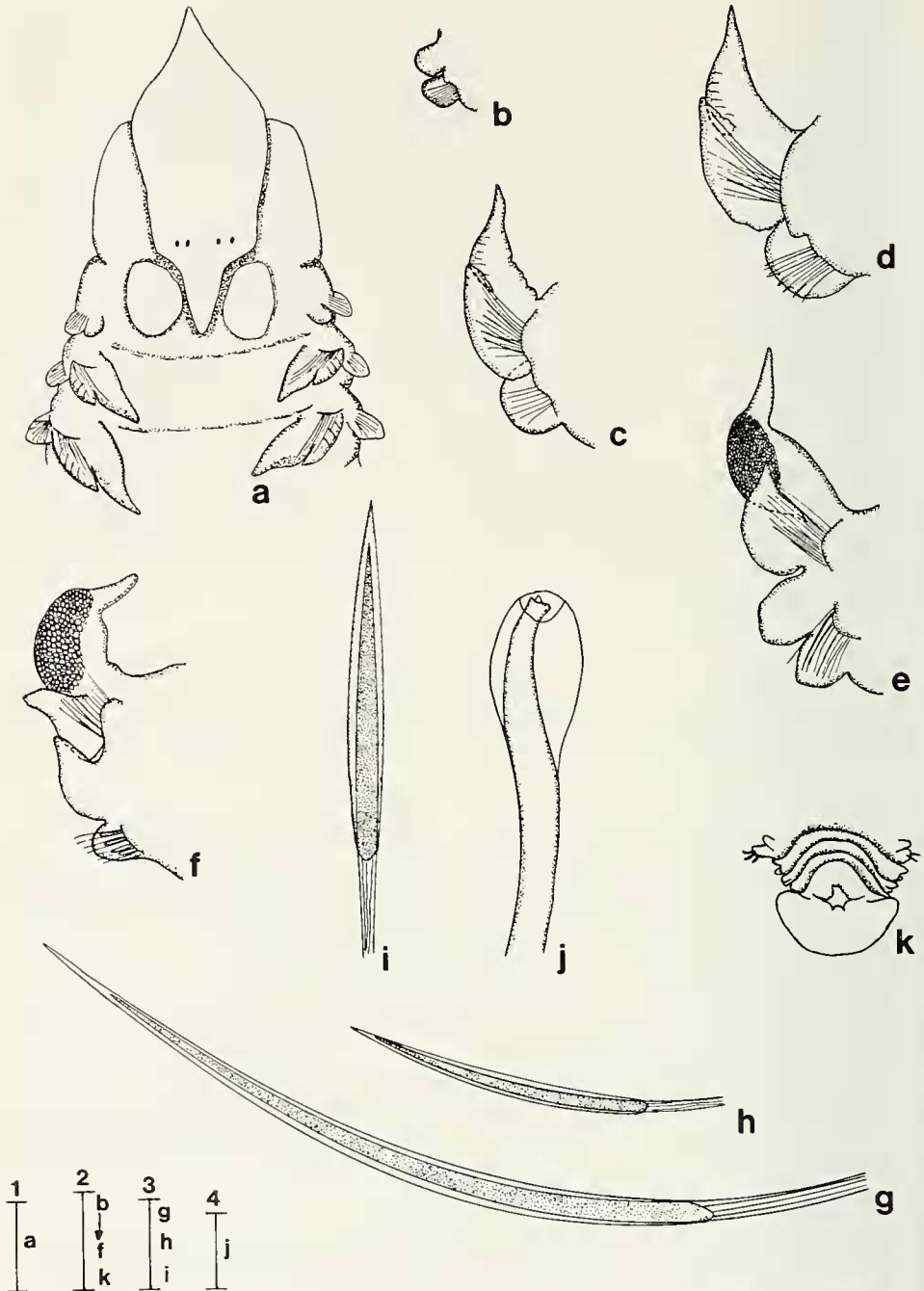


Fig. 1. *Scolelepis bullibranchia* n. sp. a, anterior end, dorsal view; b, left setiger 1, anterior view; c, left setiger 6, anterior view; d, left setiger 10, anterior view; e, left setiger 29, anterior view; f, left setiger 40, anterior view; g, superior capillary notoseta; h, sabre seta; i, anterior capillary notoseta; j, neuropodial tridentate hooded hook; k, pygidium, dorsal view. (Scale 1 = 500  $\mu$ m; 3 = 50  $\mu$ m; 4 = 20  $\mu$ m).

sions at setigers 16–22 (Fig. 1e–f). Branchiae continuing posteriorly except for last 3–5 segments.

Capillary noto- and neurosetae of anterior setigers arranged in anterior and posterior tiers. Anterior setigers with 5–6 longer superior setae (Fig. 1g); neurosetae include 3–4 inferiormost saber setae (Fig. 1h). All capillary setae with smooth sheaths; shafts striated and granulated (Fig. 1i); granulations becoming obscure in posterior setigers. Tridentate hooded hooks beginning in neuropodia 32–47 (Fig. 1j).

Pygidium with large mushroom shaped ventral pad; anus dorsal with crenulate anterior and lobed posterior margins (Fig. 1k).

*Distribution.*—*S. bullibranchia* is known from California open coast sandy beaches from Estero Bay south to San Diego.

*Etymology.*—The specific name *bullibranchia* (feminine; *bull*, Latin = blister) refers to the structure of the branchiae.

### Discussion

Presently four species of *Scolecopsis* are known from California: *S. squamata*, *S. tridentata* (Southern) (see Light 1977), *S. yamaguchii* (Imajima) (see Light 1978) and *S. foliosa* (Audouin and Milne-Edwards) (= *Nerine foliosa occidentalis* Hartman *vide* Pettibone 1963) (see Hartman 1969). *S. bullibranchia* is separable from these species by the absence of notosetae on setiger 1. *S. bullibranchia* most closely resembles *S. aitutakii* Gibbs from the central Pacific Cook Islands (Gibbs 1972). Both species possess glandular branchial structures, lack an occipital cirrus and lack notosetae on setiger 1. *S. bullibranchia* differs from *S. aitutakii* as follows: (1) glandular branchial structures are lateral, swollen and elongate oval in the former and terminal, flattened and triangular in the latter, (2) anterior branchiae are free distally from the dorsal lamellae, instead of fused and (3) hooded hooks are tridentate versus bidentate.

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